

What is claimed is:

1. A crystal unit comprising:

a crystal blank having a hole portion defined in at least one principal surface thereof, providing a vibrating region in a portion of the crystal blank which is made thinner by the hole portion;

5       excitation electrodes disposed respectively on opposite principal surfaces of the crystal blank in said vibrating region;

extension electrodes extending respectively from said excitation electrodes to respective first and second positions on an outer peripheral portion of said crystal blank; and

10       a casing;

wherein said crystal blank has a fixed end electrically and mechanically connected to said casing by eutectic alloy in said first position, and

15       said extension electrodes is electrically connected to said casing by wire bonding in said second position.

2. The crystal unit according to claim 1, wherein said crystal blank has a free end in said second position.

3. The crystal unit according to claim 2, wherein said crystal blank comprises an AT-cut quartz crystal blank having a substantially rectangular planar shape, said first position is on an end of said AT-cut quartz crystal blank, and said second position is on another end of said AT-cut quartz

5       crystal blank which is opposite to said end of said AT-cut quartz crystal blank.

4. The crystal unit according to claim 2, further comprising a pillow member mounted on said casing, said free end being placed on said pillow.

5. The crystal unit according to claim 1, wherein said eutectic alloy comprises an alloy selected from the group consisting of AuSn, AuGe, and AuSi.

6. A structure for holding a crystal blank having a hole portion defined in at least one principal surface thereof, providing a vibrating region in a portion of the crystal blank which is made thinner by the hole portion;

5 said crystal blank supporting thereon excitation electrodes disposed respectively on opposite principal surfaces of the crystal blank in said vibrating region, and extension electrodes extending respectively from said excitation electrodes to respective first and second positions on an outer peripheral portion of said crystal blank;

10 said crystal blank having a fixed end electrically and mechanically connected to a holder by eutectic alloy in said first position; said crystal blank having a free end on which wire bonding wires are connected to said extension electrodes in said second position.

7. The holding structure according to claim 6, wherein said crystal blank comprises an AT-cut quartz crystal blank having a substantially rectangular planar shape.

8. The holding structure according to claim 7, wherein said first

position is on an end of said AT-cut quartz crystal blank, and said second position is on another end of said AT-cut quartz crystal blank which is opposite to said end of said AT-cut quartz crystal blank.